3/19/87 C2175-1

THE CHRONICLE
of Higher Education.

ISSN 0009-5982

March 18, 1987 • $1.95
Volume XXXIII, Number 27

News Summary

Articles on inside pages

A calendar of spring and summer events in academe will be found in a pull-out section following Page 58.

Faculty members are battling the University of California for access to tenure files. Story on Page 16.

Complying with the new federal immigration law causes headaches for colleges. Story on Page 17.

Business leaders in Mississippi are lobbying for more money for higher education. Story on Page 22.

Support for the Defense Department's University Research Initiative may be in jeopardy. Story on Page 22.

Terrel H. Bell, former Secretary of Education, is critical of President Reagan's failure to press for education reform. Story on Page 23.

Professors are becoming increasingly involved in raising money for their institutions. Story on Page 34.

A federal court has upheld the University of Michigan's withdrawal of a degree to a student found guilty of fraud. Story on Page 40.

Documents from an investigation of the University of Houston football program suggest a scheme for paying players. Story on Page 47.

A California judge enjoined the N.C.A.A. from barring an athlete from competition for refusing to submit to a drug test. Story on Page 47.

Student revolutionaries in Guatemala have been forced into the background. Story on Page 53.

ALSO IN THIS ISSUE

Athletics	47-51
Books	8-10
Bulletin Board	61-115
Calendar of Events	B1-B28
Computers	20-21
Deadlines	B27-B28
Deaths	60
Gazette	60
Government & Politics	22-33
Grants	25, 39
International	52-55
Opinion & Letters	56-59
Personal & Professional	16-21
Philanthropy	34-39
Scholarship	6-14
Students	40-46

Software for Teaching Given Little Credit in Tenure Reviews

It's not considered research by many promotion panels

By JUDITH AXLER TURNER

Faculty members who write computer software for teaching often find that their chances of getting credit for it during promotion-and-tenure reviews are discouragingly slim.

In fact, many younger faculty members—the ones who have had the most experience with computing during their own years in college—say they are being advised to forget about writing software or incorporating computers into their courses, at least until after they have tenure. They are being told instead to spend their time doing research and getting it published.

Some faculty members say that even when software development is recognized, it is credited as instruction or service, rather than as research. The latter is more prestigious—and more important in tenure-and-promotion decisions at many universities.

The situation worries leaders in academic computing, who believe that until there is a broad base of instructional software, the computers on which so many institutions have spent so much money will not become integral to higher education.

"The key to the revolution in higher education is the development of appropriate software," says Richard M. Cyert, president of Carnegie Mellon University. And, he adds, "this development must come from faculty."

Not All Are Suffering

Not all young faculty members are suffering because of their involvement with software development, however.

William Dennis Horn, for instance, was recently granted tenure and promoted to associate professor of technical communications at Clarkson University—largely

Continued on Page 20, Column 1

New Materials that Conduct Electricity Without Resistance Astound Physicists

By KIM McDONALD

Paul Ching-Wu Chu has never seen anything like it.

His phone rings off the hook, bringing reports and questions from researchers around the world. Physicists wanting to meet and speak with him must line up outside his office. Some of his appointments now have to be scheduled as early as 7 in the morning. He has become an overnight celebrity.

> 'The most significant scientific discovery of the second half of this century'

Many scientists have never seen anything like it, either.

After more than a decade of failed experiments that had persuaded many of them to abandon hope, a surprising development last spring by two Swiss scientists gave Mr. Chu, a physics professor at the University of Houston, and his colleagues at Houston and at the University of Alabama at Huntsville the clue to surpassing what had long been thought to be an impossible barrier.

The achievement by Mr. Chu's team, which created new kinds of "superconducting" materials that all lose electrical resistance at cold, rather than ultracold, temperatures, astonished physicists when it was announced last month (*The Chronicle*, February 25).

Many of them say without reservation that it is the greatest scientific discovery since the invention of the transistor, which made possible such developments as modern radio and television.

The superconductive materials, scientists say, will pave the way for the commercial development of levitated trains that can travel above their tracks at speeds of 300 miles per hour; wires that can transmit electricity across the country with no loss in power; faster and more compact computers; energy-efficient satellites; and extremely powerful magnets.

"It's the most significant scientific dis-

Continued on Page 12, Column 1

UNIVERSITY OF HOUSTON

Paul Chu and his colleagues have seen indications of superconductivity at 240 degrees Kelvin—the temperature of a cold winter's day in Alaska.

Racial Incidents Worry Campus Officials, Prompt U. of Massachusetts Study

By MICHELE N-K COLLISON

AMHERST, MASS.

For the past month the most widely read material on the University of Massachusetts campus here hasn't been on any professor's reading list. What has captured the campus's attention is a 53-page report criticizing the university's handling of a racial brawl after the seventh World Series game.

For days after the report was released, not enough copies could be produced to satisfy the demand. Finally, the student newspaper, the *Massachusetts Daily Collegian*, printed the text. Since then, a flurry of statements from faculty and student groups have been issued in support of its findings.

The popularity of the report pleases Frederick A. Hurst, who wrote it. "I hope my report lives forever," says Mr. Hurst, who heads the Massachusetts Commission Against Discrimination, a state agency. "I hope it will help make this university a better place. I hope other schools take a look at it, because it represents a truly in-depth case study of a racial incident." Mr. Hurst is an administrative law judge.

10 Injured in Brawl

Mr. Hurst wrote the report at the request of Joseph Duffey, the university's chancellor, after it became clear that no one at the university could get to the bottom of the story. The October 27 brawl left 10 people injured, including one black student who was beaten unconscious. It was the most violent of several racial incidents reported on college campuses this year.

But Mr. Hurst wrote that it would be a mistake to conclude "that problems at the University of Massachusetts at Amherst are any worse than problems at most other universities throughout the country."

Among incidents that have been reported on other campuses:

► At the Citadel, five white students wearing sheets and carrying a charred paper cross taunted a black cadet in his dormitory bed.

► At Northern Illinois University, white students shouted racial slurs at people entering the campus center to hear the civil-rights leader Jesse Jackson speak.

► University of Michigan officials closed a campus radio station after a

Continued on Page 41, Column 1

Fewer White Men Earned Ph.D.'s in 1985

WASHINGTON

Non-citizens and American women and minority-group members in 1985 made up a record proportion of the number of people earning doctorates in the United States, the National Research Council has reported.

While the number remained relatively stable in the last decade, the percentage of white men declined, the latest annual Survey of Earned Doctorates found. The total number of doctorates received in 1985 was 31,201.

Significant changes also occurred in the fields in which students earned their doctoral degrees. The number in the life sciences grew 14.4 per cent from 1975 to 1985, while the number in the humanities dropped 29.8 per cent.

Declining proportions of the graduates, especially women and blacks, chose academic employment. More and more chose to go into business and industry.

'What's Going on Here?'

"You have to ask, What's going on here?" Susan Coyle, the project's manager, said in an interview. "Is it simply that women and blacks don't have the support and they have to rely on their own resources? Is it that they can get better-paying jobs and don't want to invest the time in a program that's going to take them 8 to 10 years to complete?"

Of non-citizens, the biggest group—and one of the fastest growing—was east Asians. The number from Africa increased greatly, as well.

Canadians composed 13.7 per cent of the foreign group in 1960 and only 4.3 per cent in 1985.

From 1975 to 1985, the proportion of new Ph.D.'s earned by women increased from 23.3 per cent to 34.3 per cent.

While the number of women increased in all groups, the greatest growth was among Americans.

Despite setbacks in some years, there was a small overall increase in the percentage of doctorates going to American minorities, from 6.3 to 9.1 per cent in the 10-year period.

Distribution by Field

Of the 24,561 U.S. citizens and non-U.S. citizens with permanent visas who earned doctorates in 1985, 93 were American Indian, 1,067 were Asian, 1,040 were black, 631 were Hispanic; and 21,174 were white. The racial and ethnic makeup of 556 U.S. recipients was not known.

The following table shows the distribution, by field, of U.S. doctorate recipients who were members of minority groups:

	American Indian	Asian	Black	Hispanic
Education	41.9%	13.4%	52.3%	32.2%
Engineering	1.1%	17.5%	2.1%	2.9%
Humanities	8.6%	8.3%	7.3%	17.2%
Life sciences	19.4%	24.9%	7.7%	13.4%
Physical sciences	4.3%	19.4%	3.3%	7.5%
Professional	6.5%	4.5%	8.1%	5.2%
Social sciences	18.3%	12.0%	19.1%	21.6%

Copies of *Summary Report 1985: Doctorate Recipients From United States Universities* may be obtained free from the Doctorate Records Project, Office of Scientific and Engineering Personnel, National Research Council, 2101 Constitution Avenue, N.W., Washington 20418.

—ELIZABETH GREENE

FACT–FILE

A Profile of 1985 Recipients of Doctorates

	Arts and humanities	Business and management	Education	Engineering, mathematics, and physical sciences	Life sciences	Social sciences	Other professional fields[1]	All fields[2]
Doctoral degrees conferred	3,428	793	6,717	7,696	5,748	5,720	1,063	31,201
Median age at conferral	34.7	35.0	36.7	30.2	31.3	33.0	37.3	33.3
Median number of years from bachelor's degree to doctorate	11.7	11.8	15.1	7.5	8.4	9.9	13.8	10.2
Sex								
Male	56.6%	81.8%	48.2%	88.1%	67.7%	58.9%	57.6%	65.7%
Female	43.4%	18.2%	51.8%	11.9%	32.3%	41.1%	42.4%	34.3%
Citizenship								
United States	83.1%	64.8%	85.5%	56.2%	77.1%	79.3%	76.2%	74.5%
Non-U.S., permanent visa	4.4%	8.2%	1.9%	7.1%	3.3%	3.7%	2.8%	4.2%
Non-U.S., temporary visa	7.7%	21.3%	8.5%	32.2%	16.0%	11.6%	13.5%	16.7%
Unknown	4.8%	5.7%	4.1%	4.5%	3.6%	5.4%	7.4%	4.6%
Marital status								
Married	56.0%	65.1%	66.9%	55.1%	57.7%	53.5%	59.2%	58.3%
Not married	37.4%	28.0%	27.8%	39.0%	37.2%	39.3%	32.3%	35.6%
Unknown	6.6%	6.9%	5.3%	5.9%	5.1%	7.2%	8.6%	6.1%
Per cent with bachelor's degree in same field as doctorate	58.8%	38.8%	38.7%	72.3%	58.3%	58.5%	24.2%	55.9%
Planned postdoctoral study								
Fellowship	3.9%	0.4%	1.4%	10.8%	27.9%	8.5%	1.3%	10.1%
Research associateship	1.1%	1.1%	1.3%	17.0%	17.0%	3.1%	0.9%	8.4%
Traineeship	0.1%	0.4%	0.6%	1.0%	1.5%	1.8%	0.1%	1.0%
Other	1.4%	0	0.7%	0.6%	3.5%	1.0%	1.1%	1.3%
Planned postdoctoral employment								
Educational institution	66.2%	74.3%	63.1%	22.8%	23.0%	37.6%	52.7%	41.3%
Industry or business	6.1%	11.0%	7.1%	29.9%	9.7%	12.4%	8.3%	14.2%
Government	2.5%	2.3%	10.0%	6.3%	6.8%	10.8%	7.9%	7.5%
Non-profit organization	5.3%	0.6%	5.1%	1.1%	1.9%	10.6%	13.5%	4.7%
Other or unknown	4.8%	1.3%	4.0%	1.8%	2.1%	5.7%	3.0%	3.4%
Postdoctoral status unknown	8.6%	8.7%	6.8%	8.8%	6.5%	8.5%	11.1%	8.0%
Primary postdoctoral work								
Research and development	7.0%	20.9%	5.5%	64.1%	48.7%	22.9%	10.5%	27.5%
Teaching	72.0%	63.2%	35.0%	24.1%	26.8%	30.8%	48.5%	36.9%
Administration	5.6%	5.5%	36.0%	1.5%	4.3%	6.5%	14.0%	13.5%
Professional services	5.0%	2.7%	13.2%	3.5%	9.4%	31.0%	15.7%	12.8%
Other	4.3%	2.1%	2.4%	1.9%	4.4%	3.3%	4.4%	3.0%
Unknown	6.1%	5.6%	7.8%	5.0%	6.4%	5.5%	6.8%	6.3%
Region of employment after doctorate								
New England	8.4%	5.1%	4.6%	6.7%	3.9%	6.4%	4.0%	5.8%
Mid-Atlantic	14.8%	12.0%	13.8%	17.2%	11.9%	18.2%	14.9%	15.3%
South Atlantic	13.3%	14.3%	16.3%	13.0%	14.2%	15.0%	15.0%	14.8%
North Central	21.6%	23.3%	21.2%	19.1%	21.7%	19.6%	20.0%	20.6%
South Central	12.4%	18.3%	13.6%	8.7%	11.6%	9.6%	15.4%	11.6%
Mountain	4.0%	3.9%	5.6%	4.9%	4.1%	4.1%	3.3%	4.6%
Pacific and insular	10.1%	9.8%	8.5%	13.1%	8.6%	10.8%	9.8%	10.3%
Foreign	7.2%	9.3%	7.2%	12.2%	19.7%	9.0%	11.3%	10.3%
Region unknown	8.2%	4.0%	9.3%	5.1%	4.3%	7.3%	6.4%	7.0%

[1] Excludes business and management, which is listed separately.
[2] Includes degree categories not listed separately.

SOURCE: SURVEY OF EARNED DOCTORATES, NATIONAL RESEARCH COUNCIL

The resource that we are...
College Survival, Inc. offers consultation for educators interested in improving student retention. We provide curriculum planning, teacher training, and student materials to colleges and universities throughout the U.S. and Canada.

The promise that we are...
We will assist you in developing or revitalizing a student success course that can significantly improve student performance and retention.

Student retention and Student success

Call or write for an information packet.

COLLEGE SURVIVAL, INC.
2650 Jackson Blvd., Rapid City, SD 57702 **1-800-528-8323** (Outside US or in SD, call 1-605-341-3901)